

Recovery Plan Action Status

Plan Name: Recovery Plan for Serpentine Soil Species of the San Francisco Bay Area

Plan Status: Final

Plan Date: 30-Sep-98

Lead Agency: USFWS

Lead Office: Sacramento Fish And Wildlife Office

(916)

414-6600)

Species	Action Priority #	Action #	Action Description	Action Status	Est. Initiation Date	Est. Completion Date	Responsible Parties	Work Type	Labor Type	Action Comments
Bay checkerspot butterfly (Euphydryas editha bayensis), Tiburon mariposa lily (Calochortus tiburonensis), Metcalf Canyon jewelflower (Streptanthus albidus ssp. albidus), Pennell's bird's-beak (Cordylanthus tenuis ssp. capillaris), San Mateo woolly sunflower (Eriophyllum latilobum), Coyote ceanothus (Ceanothus ferrisiae), White-rayed pentachaeta (Pentachaeta bellidiflora), Presidio clarkia (Clarkia franciscana), Fountain thistle (Cirsium fontinale var. fontinale), Tiburon paintbrush (Castilleja affinis ssp. neglecta), Marin dwarf-flax (Hesperolinon congestum), Tiburon jewelflower (Streptanthus niger), San Mateo thormint (Acanthomintha obovata ssp. duttonii), Santa Clara Valley dudleya (Dudleya setchellii)	2	1.1	Establish cooperative programs with participants from the public and private sector	Ongoing Not Current	FY 1995 - FY 1999		U.S. Fish and Wildlife Service, California Department of Fish and Game	Other: Information and Education	Internal Technical Assistance	Cooperative program established with Stuart Weiss and San Mateo Parks for reintroduction of Bay Checkerspot into Edgewood Park.

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Bay checkerspot butterfly (Euphydryas editha bayensis), Santa Clara Valley dudleya (Dudleya setchellii)	1	2.1.17	Secure and protect serpentine habitat in Calero Reservoir (Santa Clara County) for multiple species	Not Started			City of San Jose, California, Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game, Private landowners	Acquisition: Easement	Internal Field Assistance	

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Bay checkerspot butterfly (Euphydryas editha bayensis), Santa Clara Valley dudleya (Dudleya setchellii)	1	2.1.18	Secure and protect serpentine habitat in Calero County Park (Santa Clara County) for multiple species	Not Started			Santa Clara County, California, U.S. Fish and Wildlife Service	Acquisition: Easement	Internal Field Assistance	Nature and extent of actions needed not yet known
Bay checkerspot butterfly (Euphydryas editha bayensis), Metcalf Canyon jewelflower (Streptanthus albidus ssp. albidus), Coyote ceanothus (Ceanothus ferrisiae), Tiburon paintbrush (Castilleja affinis ssp. neglecta), Santa Clara Valley dudleya (Dudleya setchellii)	1	2.1.20	Secure and protect serpentine habitat in Kirby area (S. of Metcalf Rd.) (Santa Clara County) for multiple species	Ongoing Current	FY 1995 - FY 1999		City of San Jose, California, Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game, Private landowners	Acquisition: Other	Internal Field Assistance	
Bay checkerspot butterfly (Euphydryas editha bayensis), Metcalf Canyon jewelflower (Streptanthus albidus ssp. albidus), Santa Clara Valley dudleya (Dudleya setchellii)	1	2.1.21	Secure and protect serpentine habitat in Metcalf area (N. of Metcalf Rd.) (Santa Clara County) for multiple species	Ongoing Current	FY 2000 - FY 2004		City of San Jose, California, Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game, Private landowners	Management: Planning	Internal Field Assistance	2005-548 acres purchased by VTA, managed by Santa Clara Co Open Space Authority. Mapping, containment and control of barbed goat grass.
Bay checkerspot butterfly (Euphydryas editha bayensis), Metcalf Canyon jewelflower (Streptanthus albidus ssp. albidus), Santa Clara Valley dudleya (Dudleya setchellii)	1	2.1.23	Secure and protect serpentine habitat in Silver Creek Hills (Santa Clara County) for multiple species	Ongoing Current	FY 1995 - FY 1999		City of San Jose, California, Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game, Private landowners	Acquisition: Easement	Labor type not yet selected	
Bay checkerspot butterfly (Euphydryas editha bayensis), Metcalf Canyon jewelflower (Streptanthus albidus ssp. albidus), Santa Clara Valley dudleya (Dudleya setchellii)	1	2.1.26	Secure and protect serpentine habitat west of San Martin area (including Hayes Valley / Lions Peak) (Santa Clara County) for multiple species	Not Started			Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game, Private landowners	Acquisition: Easement	Internal Field Assistance	

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Bay checkerspot butterfly (Euphydryas editha bayensis), Santa Clara Valley dudleya (Dudleya setchellii)	1	2.1.27	Secure and protect serpentine habitat in Santa Teresa Hills (Santa Clara County) for multiple species	Not Started			City of San Jose, California, Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game, Private landowners	Acquisition: Easement	Internal Field Assistance	
Bay checkerspot butterfly (Euphydryas editha bayensis), Metcalf Canyon jewelflower (Streptanthus albidus ssp. albidus), Santa Clara Valley dudleya (Dudleya setchellii)	1	2.1.28	Secure and protect serpentine habitat on Tulare Hill (Santa Clara County) for multiple species	Ongoing Current	FY 1995 - FY 1999		City of San Jose, California, Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game, Private landowners	Acquisition: Easement	Internal Field Assistance	
Santa Clara Valley dudleya (Dudleya setchellii)	3	2.1.29	Secure and protect serpentine habitat in Valley Christian (in Communications Hill area) (Santa Clara County) for multiple species	Not Started			Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game	Acquisition: Easement	Internal Field Assistance	2002-MEC Ecological Preserve established 116ac. 2005-North Section bought by Whiskey Hill Assoc (Eric Brandenburg) planned for mitigation bank. 2006-PG&E Safe Harbor agreement will allow grazing of entire hill.
Bay checkerspot butterfly (Euphydryas editha bayensis), Santa Clara Valley dudleya (Dudleya setchellii)	2	2.2.19	Secure and protect serpentine habitat in Chesbro Reservoir area (west of Morgan Hill)(Santa Clara County) for multiple species	Not Started			U.S. Fish and Wildlife Service, California Department of Fish and Game	Acquisition: Easement	Internal Field Assistance	

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Santa Clara Valley dudleya (Dudleya setchellii)	2	4.2.31	Conduct surveys in historic and potential habitat in historic and potential habitat in Calero Reservoir area (Santa Clara County) for multiple species	Not Started			Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Population Surveys	Graduate Student	

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Metcalf Canyon jewelflower (<i>Streptanthus albidus</i> ssp. <i>albidus</i>), Santa Clara Valley dudleya (<i>Dudleya setchellii</i>)	2	4.2.32	Conduct surveys in historic and potential habitat in Calero Reservoir area (Santa Clara County) for multiple species	Not Started			U.S. Federal Aviation Administration, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Population Surveys	Graduate Student	Mostly private lands
Metcalf Canyon jewelflower (<i>Streptanthus albidus</i> ssp. <i>albidus</i>), Coyote ceanothus (<i>Ceanothus ferrisiae</i>), Tiburon paintbrush (<i>Castilleja affinis</i> ssp. <i>neglecta</i>), Santa Clara Valley dudleya (<i>Dudleya setchellii</i>)	1	4.2.33	Survey historic and potential habitat at Coyote Ridge area (Santa Clara county) for multiple species	Partially Complete	FY 2005		Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game, Private landowners	Research: Population Surveys	Graduate Student	<p>2005-Transition Zone between S. Albidus and Albidus and S. Albidus peramoenus mapped.</p> <p>2005-2006- Comprehensive mapping of Dudleya on selected mitigation parcels (100oc) completed-more mapping planned elsewhere.</p> <p>2006-C. Affinis neglecta pops mapped in detail. 135 plants at southern pop, about 1000 plants in northern canyon on 0.25 ac.</p> <p>Annual survey of Bay Area Checkerspot Butterfly. Conducted at UTC, Kirby Canyon, and Young Ranch.</p>
Coyote ceanothus (<i>Ceanothus ferrisiae</i>), Tiburon paintbrush (<i>Castilleja affinis</i> ssp. <i>neglecta</i>), Santa Clara Valley dudleya (<i>Dudleya setchellii</i>)	2	4.2.38	Conduct surveys in historic and potential habitat North of Llagas Avenue (Santa Clara County) for multiple species	Not Started			Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Population Surveys	Graduate Student	
Tiburon paintbrush (<i>Castilleja affinis</i> ssp. <i>neglecta</i>), Santa Clara Valley dudleya (<i>Dudleya setchellii</i>)	2	4.2.40	Conduct surveys in historic and potential habitat in Palm Avenue / Kalana Hills area (Santa Clara County) for multiple species	Not Started			Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Population Surveys	Graduate Student	

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Metcalf Canyon jewelflower (<i>Streptanthus albidus</i> ssp. <i>albidus</i>), Santa Clara Valley dudleya (<i>Dudleya setchellii</i>)	1	4.2.41	Survey historic and potential habitat in the San Martin area (Santa Clara County) for multiple species	Not Started			Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Population Surveys	Graduate Student	
Santa Clara Valley dudleya (<i>Dudleya setchellii</i>)	1	4.2.42	Survey historic and potential habitat at Santa Teresa Hills (Santa Clara County) for multiple species	Not Started			Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Population Surveys	Graduate Student	
Metcalf Canyon jewelflower (<i>Streptanthus albidus</i> ssp. <i>albidus</i>), Santa Clara Valley dudleya (<i>Dudleya setchellii</i>)	2	4.2.43	Conduct surveys in historic and potential habitat Tulare Hill area (Santa Clara County) for multiple species	Ongoing Current	FY 2000 - FY 2004		Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Population Surveys	Graduate Student	2001-2006-D. Setchellii mapped MMEC ecological preserve and PG&E land. No S. Albidus Albidus found, plans for reintroduction explored informally. Since 2004 annual surveys of listed plants and bay checkerspot butterfly conducted.
Santa Clara Valley dudleya (<i>Dudleya setchellii</i>)	2	4.2.44	Conduct surveys in historic and potential habitat for Uvas Road area (Santa Clara County) for multiple species	Not Started			Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Population Surveys	Graduate Student	
Bay checkerspot butterfly (<i>Euphydryas editha bayensis</i>), Metcalf Canyon jewelflower (<i>Streptanthus albidus</i> ssp. <i>albidus</i>), Coyote ceanothus (<i>Ceanothus ferrisiae</i>), Fountain thistle (<i>Cirsium fontinale</i> var. <i>fontinale</i>), Tiburon paintbrush (<i>Castilleja affinis</i> ssp. <i>neglecta</i>), Santa Clara Valley dudleya (<i>Dudleya setchellii</i>)	1	5.24	Conduct research on vegetation management methods in selected areas county-wide (Santa Clara County) for multiple species	Ongoing Current	FY 2000 - FY 2004		Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Habitat Requirements	Graduate Student	

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Bay checkerspot butterfly (<i>Euphydryas editha bayensis</i>), Metcalf Canyon jewelflower (<i>Streptanthus albidus</i> ssp. <i>albidus</i>), Coyote ceanothus (<i>Ceanothus ferrisiae</i>), Fountain thistle (<i>Cirsium fontinale</i> var. <i>fontinale</i>), Tiburon paintbrush (<i>Castilleja affinis</i> ssp. <i>neglecta</i>), San Mateo thornmint (<i>Acanthomintha obovata</i> ssp. <i>duttonii</i>), Santa Clara Valley dudleya (<i>Dudleya setchellii</i>)	2	5.26	Conduct necessary research at selected areas county-wide in Santa Clara County on restoring native habitats on serpentine and non-serpentine soils (multiple species)	Not Started			Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Habitat Requirements	Graduate Student	
Santa Clara Valley dudleya (<i>Dudleya setchellii</i>)	2	5.27	Conduct necessary research at Almaden Quicksilver Park (Santa Clara County) for multiple species	Not Started			Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Taxonomic Studies	Graduate Student	

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Santa Clara Valley dudleya (Dudleya setchellii)	2	5.29	Conduct necessary research at Calero Reservoir area (includes Calero County Park) (Santa Clara County) for multiple species	Not Started			Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Taxonomic Studies	Graduate Student	
Santa Clara Valley dudleya (Dudleya setchellii)	1	5.30	Conduct necessary research at Coyote Ridge (Santa Clara County) for multiple species	Ongoing Current	FY 2000 - FY 2004		Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game, Private landowners	Research: Habitat Status	Species Expert	<p>CVDRP funding (total \$100,000 from 2005-2007) included 2005-2006 effects of clipping on S.A. peramoenus.</p> <p>2005-2006-studies of Dudleya, shoot, flower & capsule production.</p> <p>2005-2006 effects of grazing and burning on grassland composition. 2005-2006-C. font camp recruitment studies by Janell Hillman of Santa Clara Water District and SF State University. 2002-2003-nitrogen deposition research.</p> <p>Wildlife cameras have been installed to determine what is eating the Tiburon Indian paintbrush. Jackrabbits were seen in photos.</p>
Coyote ceanothus (Ceanothus ferrisiae), Santa Clara Valley dudleya (Dudleya setchellii)	3	5.31	Conduct necessary research North of Llagas Avenue (Santa Clara County) for multiple species	Not Started			Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Management Techniques	Graduate Student	Research includes fire ecology of Ceanothus ferrisiae
Santa Clara Valley dudleya (Dudleya setchellii)	3	5.33	Review species listing status for species of concern Opler's longhorn moth	Not Started			Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Management Techniques	Graduate Student	

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Metcalf Canyon jewelflower (Streptanthus albidus ssp. albidus), Santa Clara Valley dudleya (Dudleya setchellii)	2	5.34	Conduct necessary research at San Martin area (including Hayes Valley / Lions Peak) (Santa Clara County) for multiple species	Not Started			Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Management Techniques	Graduate Student	
Santa Clara Valley dudleya (Dudleya setchellii)	2	5.35	Conduct necessary research at Sant Teresa Hills (Santa Clara County) for multiple species	Not Started			Santa Clara County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Management Techniques	Graduate Student	